



## Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact [support@jstor.org](mailto:support@jstor.org).

# ARITHMETIC.

Conducted by B. F. FINKEL, Springfield, Mo. All contributions to this department should be sent to him.

## SOLUTIONS OF PROBLEMS.

50. Proposed by F. P. MATZ, M. Sc., Ph. D., Professor of Mathematics and Astronomy in Irving College, Mechanicsburg, Pennsylvania.

If  $A$  can walk to the city and ride back, he will require  $m=5\frac{1}{2}$  hours; but if he walk both ways, he will require  $n=7$  hours. How many hours will he require to ride both ways?

I. Solution by A. L. FOOTE, Middleburg, Connecticut.

Taking it for granted that he can walk or ride either way with equal facility, we find that he could walk to the city in  $\frac{n}{2}=3\frac{1}{2}$  hours and can ride back in  $m-\frac{n}{2}=5\frac{1}{2}-3\frac{1}{2}=1\frac{3}{4}$  and he can also ride to the city in  $1\frac{3}{4}$  hours, so he will take  $1\frac{3}{4}\times 2=3\frac{1}{2}$  hours. On any other supposition the problem is indeterminate.

II. Solution by H. C. WILKS, Murrys ville, West Virginia, and J. F. W. SCHEFFER, A. M., Hagerstown, Maryland

$A$  can walk up and walk back in  $n=7$  hours. He can walk up and ride back in  $m=5\frac{1}{2}$  hours.

$\therefore$  times of walking back and riding back differ by  $n-m=1\frac{3}{4}$  hours.

Also times of walking round trip and riding round trip differ by  $2(n-m)=3\frac{1}{2}$  hours. But he *walks* round trip in  $n=7$  hours.

Hence he *rides* round trip in  $n-2(n-m)=7-3\frac{1}{2}$  or in  $2m-n=3\frac{1}{2}$  hours.

III. Solution by Professor P. S. BERG, Larimore, North Dakota.

To walk one way he will require  $\frac{n}{2}$  hours. Hence to ride one way he will require  $\left(m-\frac{n}{2}\right)$  hours, and to ride both ways he will require

$$2\left(m-\frac{n}{2}\right)=3\frac{1}{2} \text{ hours.}$$

IV. Solution by G. B. M. ZERR, A. M., Ph. D., Professor of Mathematics and Vice President in Texarkana College, Texarkana, Arkansas.

$\frac{n}{2}$  = number of hours to walk one way, and

$m-\frac{n}{2} = \frac{2m-n}{2}$  = number of hours to ride one way.

$\therefore 2\left(\frac{2m-n}{2}\right) = 2m-n$  = number of hours to ride both ways.

But  $m=5\frac{1}{2}$ ,  $n=7$ .

$\therefore 3\frac{1}{2}$  hours = required time.

This problem was also solved by Professor COOPER D. SCHMITT, —, and the PROPOSER.